AMENDMENTS TO THE CLAIMS

Claims 1-13 (Canceled)

14. (Currently Amended) A device for use in a surgical procedure in which an incision is made between two juxtaposed ribs of a patient, the device comprising:

a housing;

a first arm member having a proximal end portion and a distal end portion, the distal end portion having a rib engaging blade;

a second arm member having a proximal end portion and a distal end portion, the distal end portion having a rib engaging blade;

a mechanism interposed between the first and the second arm members, at least a portion of said mechanism being contained in said housing, said mechanism ~~and~~ arranged to mechanically drive the arm members toward and away from each other, wherein operation of the mechanism to drive said arm members away from each other in a transverse direction substantially parallel to said housing, when said rib engaging blades are each respectively engaged with a rib on opposite sides of the incision, also drives movement of one of said arm members and one of said rib engaging blades in an upward direction different from said transverse direction with respect to said housing and with respect to the other of the arm members and rib engaging blades.

15. (Original) The device of claim 14 wherein the mechanism includes a rack bar fixedly attached to the first arm member at one end and at another end movably engages the proximal end portion of the second arm member such that the second arm member moves away and toward the first arm member along the rack bar.

Claims 16 - 17 (Canceled)

18. (Original) The device of claim 14 wherein the distal end portion of the first arm member further includes a plurality of fingers extending away from the blade for retaining fatty tissue away from the incision.

19. (Currently Amended) The device of claim 14 wherein the arm member further having the rib engaging blade attached thereto that is moved in an upward direction is rotatably mounted with respect to the mechanism and is rotatable during use.

20. (Currently Amended) A device for use in a surgical procedure for spreading an incision, said device comprising:

a base portion,

a first arm member fixedly attached to said base portion and having a distal end portion extending away from said base portion, said distal end portion having a first rib engaging blade;

a second arm member movably mounted with respect to said base portion, said second arm member having a second rib engaging blade; and

a driving mechanism mechanically interconnecting between said first and second arm members and operably providing a driving action to drive said second arm member away from said first arm member and, with the same driving action, to drive said second rib engaging blade and said second arm vertically with respect to said base portion and with respect to said first rib engaging blade when said first and second rib engaging blades are engaged with ribs on opposite sides of the incision, wherein the vertical driving direction is different from the direction in which the second arm member is driven away from the first arm member.

21. (Previously Presented) The device of claim 20, further comprising a support arm rotatably mounted with respect to said base portion, said support arm adapted to rest against the surface of a body of a patient during driving by said mechanism.

22. (Previously Presented) The device of claim 21, wherein said support arm is fixed with respect to said second arm in one direction of rotation and rotates with said second arm with respect to said base portion during driving by said mechanism.

23. (Previously Presented) The device of claim 21, wherein said support arm ratchets with respect to said second arm.

24. (Previously Presented) The device of claim 21, wherein said support arm comprises a sternal pad at a distal end thereof.

25. (Currently Amended) A retractor for opening the chest during surgery, said retractor comprising:

first and second substantially opposed retractor blades adapted to engage opposite incision edges of a chest incision;

first and second arms connecting said first and second retractor blades to a frame structure; and

adjusting means associated with the frame and interconnected between said first and second arms for adjusting the relative distance between the first and second arms, wherein said adjusting at the same time drives adjustment of the relative height between the first and second retractor blades, ~~and~~ between the first and second arms, wherein adjustment of the relative distance is by movement along a direction different from a direction of the driving to adjust the relative height.

26. (Previously Presented) The retractor of claim 25, wherein said second arm is rotatably and translationally movable with respect to said frame, and wherein driving of said second arm by said adjusting means to increase the relative distance between the first and second arms also rotates the second arm with respect to said frame, thereby lifting said second retractor blade relative to said first retractor blade.

27. (Previously Presented) The retractor of claim 26, wherein said second retractor blade is attached to said second arm and rotates with said second arm during said lifting.

28. (Previously Presented) The retractor of claim 26, further comprising a support arm rotatably coupled to said second arm.

29. (Currently Amended) A device for use in a surgical procedure for spreading an incision, said device comprising:

a base portion,

a first arm member fixedly attached to said base portion and having a distal end portion extending away from said base portion, said distal end portion having a first rib engaging blade;

a second arm member movably mounted with respect to said base portion, said second arm member having a second rib engaging blade;

a support arm rotatably coupled to said second arm; and

a mechanism operable to drive said second arm member away from said first arm member and to drive said second rib engaging blade vertically with respect to said first rib engaging blade when said support arm contacts an external chest wall and said first and second rib engaging blades are engaged with ribs on opposite sides of the incision, said support arm transferring lifting force to said second arm.

30. (Previously Presented) The device of claim 29, further comprising an offset positioning assembly that allows said support arm to rotate with respect to said second arm in one direction of rotation and prevents rotation of said support arm in an opposite direction of rotation.

31. (Previously Presented) The device of claim 30, wherein said offset positioning assembly comprises a pawl mounted in one of said support arm and said second arm, and a ratchet mounted in the other of said support arm and said second arm.

32. (Previously Presented) A device for use in a surgical procedure for spreading an incision, said device comprising:

a base portion extending substantially horizontally;

a first blade arm fixedly attached to said base portion and extending outwardly and downwardly therefrom to a first distal end portion having a first rib engaging blade;

a second blade arm rotatably and translationally mounted with respect to said base portion and extending downwardly therefrom to a second distal end portion having a second rib engaging blade;

a support arm rotatably coupled to said second arm; and

a mechanism operable to drive said second arm member away from said first arm member and to drive said second rib engaging blade vertically with respect to said first rib engaging blade when said first and second rib engaging blades are engaged with ribs on opposite sides of the incision.

33. (Currently Amended) A retractor for opening the chest during surgery, said retractor comprising:

first and second substantially opposed retractor blades adapted to engage opposite incision edges of a chest incision;

first and second arms connecting said first and second retractor blades to a frame structure;

a support arm adjustably mounted to said first arm, said support arm being adjustable for contact with an external surface of a patient's body prior to spreading the incision edges;

first adjusting means associated with the frame structure; and

second adjusting means arranged to allow adjustment of the support arm prior to said spreading;

wherein adjustment by said first adjusting means adjusts the relative distance between the first and second arms as well as the relative height between the first and second retractor blades.

34. (Previously Presented) The retractor of claim 33, wherein said support arm comprises a pad arm having a sternal pad at a distal end thereof.

35. (Previously Presented) The retractor of claim 33, wherein said first arm is rotatably and translationally movable with respect to said frame, and wherein adjustment by said first adjustment means comprise driving of said first arm by said adjusting means to increase the relative distance between the first and second arms, thereby also rotating the first arm with respect to said frame, thereby lifting said first retractor blade relative to said second retractor blade.

36. (Currently Amended) A device for use in a surgical procedure for spreading an incision, said device comprising:

a base portion,

a first arm member fixedly attached to said base portion and having a distal end portion extending away from said base portion, said distal end portion having a first rib engaging blade;

a second arm member movably and rotatably mounted with respect to said base portion, said second arm member having a second rib engaging blade;

a mechanism operable to drive said second arm member away from said first arm member and to drive said second rib engaging blade vertically with respect to said first rib engaging blade when said first and second rib engaging blades are engaged with ribs on opposite sides of the incision; and

a support arm rotatably mounted with respect to said base portion, said support arm adapted to rest against the surface of a body of a patient during driving by said mechanism.

37. (Previously Presented) A retractor for opening the chest during surgery, said retractor comprising:

first and second substantially opposed retractor blades adapted to engage opposite incision edges of a chest incision;

first and second arms connecting said first and second retractor blades to a frame structure; and

adjusting means associated with the frame for adjusting the relative distance between the first and second arms and for adjusting the relative height between the first and second retractor blades, wherein said second arm is rotatably and translationally movable with respect to said frame, and wherein driving of said second arm by said adjusting means to increase the relative distance between the first and second arms also rotates the second arm with respect to said frame, thereby lifting said second retractor blade relative to said first retractor blade.